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IN THE

Supreme Court of the United States

OCTOBER TERM, 1948

Nos. 7, 8 and 48

THOGER GRONBERG JUNGERSEN,
Petitioner-Respondent,

v.

OSTBY AND BARTON COMPANY, et al.,
Respondents-Petitioners,

and

THOGER GRONBERG JUNGERSEN,
Petitioner,

v.

ROBERT BADEN, ROSE-BADEN, ALBERT FOSS, et al., etc.,
Respondents.

BRIEF FOR OSTBY AND BARTON, ROBERT BADEN, ET AL., ETC.

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November 2, 1948.

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Opinions Below

The opinion of the District Court for the District of New Jersey in Nos. 7 and 8 is reported in 65 F. Supp.

652 (22a-32a*); the opinion of the Court of Appeals for the Third Circuit is reported in 163 F. 2d 312 (378 of O & B record).

The opinion of the District Court for the Southern District of New York in No. 48 is reported in 69 F. Supp. 922 (26-39); the opinion of the Court of Appeals for the Second Circuit and the dissent of L. Hand, Circuit Judge, is reported in 166 F. 2d 807 (209-219).

Jurisdiction

The judgment of the Court of Appeals for the Third Circuit in Nos. 7 and 8 was entered on September 5, 1947 (380 of O & B record). On June 7, 1948 motions for leave to file petitions for rehearing out of time and petitions for rehearing in Nos. 7 and 8 were granted (334 U. S.).

The judgment of the Court of Appeals for the Second Circuit in No. 48 was entered March 10, 1948 (220), and petition for writ of certiorari granted on June 7, 1948 (334 U. S.).

The jurisdiction of this Court is founded upon a conflict between the decision of the Court of Appeals for the Third Circuit in Nos. 7 and 8 and that of the Court of Appeals for the Second Circuit in No. 48.

Statement of the Case

These actions concern Jungersen Patent No. 2,118,468.

In the O & B action, instituted in 1941 for declaratory judgment, Jungersen admitted that Claims 1-4 of that

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* The designation of record pages follows that of Jungersen's Brief (J's. Br., p. 2—footnote).

Italics and Parentheses, unless the contrary is indicated, are ours.

Ostby & Barton Company and American Associates, respondent in No. 7 and petitioner in No. 8 and the original plaintiffs in the New Jersey action, hereinafter will be referred to as O. & B. Baden, et al., etc., respondents in No. 48 and the original defendants in the New York action, will be referred to as Baden. Jungersen, petitioner in Nos. 7 & 48 and respondent in No. 8, as Jungersen.

patent were not infringed (47a-48a). On May 7, 1946 Judge Meaney held Claims 1-4 valid but not infringed and Claims 5-6 invalid (22a-40a). The Court of Appeals for the Third Circuit, "For the reasons stated in the opinion of Judge Meaney" affirmed (378 of O & B record).

On February 14, 1944, prior to the hearing of the O & B case, Jungersen filed complaint in the Southern District of New York asserting infringement by the partnership of Baden and Foss of the Jungersen patent (3-8). Thereafter, fifteen individuals and seven corporations intervened as parties defendant (16, 24). On February 7, 1947, Judge Rifkind held the entire Jungersen patent invalid and void (26-39, 43-50). The Court of Appeals for the Second Circuit by Judge Clark, Judge Augustus N. Hand concurring, affirmed (210-216). Judge Learned Hand dissented (216-219).

Thus, the four courts which have considered the Jungersent patent are agreed that Claims 5 and 6 are invalid. The conflict exists, with respect to Claims 1-4 which the Third Circuit held valid but not infringed, and the Second, invalid.

The Jungersen patent issued May 24, 1938 on an application filed September 28, 1934. Its disclosure is adequately set forth in Jungersen's Brief (J's. Br., pp. 9-11). It is sufficient here to note that it relates to a "Method of Casting Articles of Intricate Design and a Product Thereof" (185; 501a). Briefly, the method employs six sequential steps:

(a) Making an original model.

(b) Making a mold around the model.

(c) Casting a wax pattern in this primary mold.

(d) Pouring around the pattern a secondary mold, of plaster-of-Paris-like material, called an "investment".

(e) Drying the investment, and heating it to melt out the wax.

(f) Casting molten metal into the cavity in the investment to produce a replica of the original model.

The mold of step (b) is disclosed as "preferably made of rubber" (186, c. 1, ll. 49-50; see also ll. 33-37, c. 2, ll. 29-32), and the two casting operations—steps (c) and (f)—employ centrifugal force (186, c. 2, ll. 1-28).

All six steps of the patent, performed in the sequence of the patent, are old (see Chart following p. 24). The art not only demonstrates this but it is admitted by Jungersen both in his corresponding British patent* (495a, ll. 19-28) and in his brief here (J's. Br., pp. 12-24).

And, both in the British patent and in the Brief here, the only novelty even claimed by Jungersen is in the *substitution,* at step (c), of centrifugal force to impel the molten wax into the mold in place of the other types of force used by the prior art to accomplish the same end (495a, ll. 38-50; J's. Br., pp. 28-29).

Centrifugal force, however, was old and extensively employed. And Jungersen himself was well acquainted with it (91-92, 97-98).

Not only was centrifugal force old; it was, in fact, but one of a number of old types of applied force. All of those types were recognized generally as equivalents (97, 126, 131-134, 154, 158-159, 165-167, 150a). And one of those equivalent types—die casting—had been used by Kralund (413a-416a) at the two casting steps (414a, ll. 53-61, 75-85; 415a, ll. 51-122) of the process of the Jungersen patent.

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*Of this, the Court of Appeals for the Second Circuit said: "It is clear from this admission that all but the use of centrifugal casting to force the wax and the metal into their respective moulds was deemed old. The validity of this statement in Jungersen's British patent is amply demonstrated by the prior art" (212).

Stern's "Die-Casting Practice", published in 1930 (477a-494a), says that "The centrifugal method has the advantage of great simplicity, * * *" and "The pressure (die-casting) method has the greatest range of application and power" (485a-486a).

The simplest form of die-casting apparatus is a syringe (114a, 149a), and Jungersen admits, albeit unwillingly, that "A syringe is a very old instrument" (97) and that so also is the centrifugal machine (98) and that either may be used to cast the wax into the mold (92, 97). And his charge that both O & B and Baden have infringed in their use of a syringe (97-98; 20a-21a, 47a-48a) is further concession of an equivalence which is nowhere challenged or controverted.

Thus, the record fully sustains the finding of Judge Rifkind that "The substitution of centrifugal force for other means of casting the wax is not invention, but the application of an equivalent means" and "Once the use of force for the introduction of the wax into the mould was known to be desirable—and Kralund showed it—the choice of alternative means for the application of force became a non-inventive application of the skill of the caster's art" (48-49, Findings 19-20).

Judge Meaney, in the O & B case, seems to have recognized that these various means of applying force were equivalents, though he refused to give effect thereto, as is shown by his statement that, "* * * it is no argument for invalidity to assert that the use of centrifugal force is the mere substitution of equivalents which do substantially the same thing" (26a-27a).

Jungersen makes no effort to controvert any of this.

To minimize its effect, however, Jungersen presses a two-pronged attack.

First, his entire brief is a subtle but persistent attempt to create the impression that the *jewelry art* is *sui generis* and that *jewelry* casting is quarantined from and has no contact with other phases or types of the casting art (J's Br., pp. 4-6, 9, 11-12, 25-27, 34).

Judge Meaney was taken in by this argument (24a, 34a-37a, Findings 11-13, 21-22, 27), which, apparently, also influenced Judge Learned Hand (218).

But the entire argument is without support in the facts for two unchallenged reasons:

(a) The Jungersen patent is *not* restricted to the casting of jewelry. It is decidedly broader. Its title is "Method of *Casting* Articles of Intricate Design and a Product Thereof." Its "principal object" is "the *casting* of small metal articles, particularly articles of intricate detail such as jewelry" and "A further object" is "the formation of intricate *castings*." In explaining its method, the patent instances "a piece of jewelry *or any small article to be cast*" (186, c. 1, ll. 1-4, 10-15, 29-30).

There is *no* evidence in this record that the patent is restricted to the "casting of jewelry" as Jungersen implies. To the contrary, the record here shows what is shown on the face of the patent—that it relates to the art of casting (152).

Jungersen admits that "It can be used for other purposes" than the casting of jewelry (101), and, in fact, he granted licenses under this patent (and others) to manufacture "small machine parts, instrument parts and other small articles for use in furthering the war effort of the United States" (100; 99-101) and Jungersen's witness, Schaeffer, testified his firm "used the Jungersen method to make quite a number of [intricate vein propeller assemblies for oxygen tanks]" (120).

(b) Even if the patent had been restricted to jewelry casting, the latter is only a part of the general casting art and the jeweler had at hand, when he chose to avail himself of it, all the tools of that art.

Mr. Tour,* the expert of both O & B and Baden, made the unchallenged statement that:

> "Jewelry casting is just part of the casting art. It makes no difference whether you are casting jewelry, statuary, dental or industrial castings" (164a; so also, 151).

There is not one word in this record to the contrary.

Judge Rifkind clearly was hewing to the facts when he found that "The only substantial evidence on the subject was that the casting of jewelry was part of the casting art" and that "The specification of the patent in suit is not limited to jewelry casting and by its specific terms is brought within the casting art" (49, Findings 22, 23; see also, 37-39).

Judge Clark, speaking for the Second Circuit, reviewed the facts at length and arrived at the same conclusion (213-214).

In contrast Judge Meaney found (36a):

> "22. None of the prior patents or prior publications had for their object the casting of jewelry or objects of intricate design, where fineness of intricate detail was a vital component in the final casting. To this extent the prior art was a non-analogous art, * * *".

His error is plain and readily demonstrable.

The McManus centrifugal machine, designed particularly for the dentist, "with slight modifications in the structure

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* Jungersen's counsel stated on the record: "I will concede Mr. Tour's capacity" (143a).

Argument

1. The Jungersen patent is invalid because anticipated by Kralund

Kralund Patent No. 1,238,789 (413a-416a) was issued September 4, 1917. It relates to the "Method or Art of Making Commercial Castings" and to that end it borrows "certain steps and practices, some of which are old and well known in the art of making dental inlays" (414a, ll. 70-73). The patent discloses the following steps:

1. "forming a pattern by forcing molten material having a low fusing point into a metal mold or die, the cavity of which corresponds with the casting to be made" (415a, ll. 20-23). The molten material is "a low fusing material such as wax, or a metal alloy having a low fusing point" (415a, ll. 62-64). It is forced into the "metal mold or die" by "an ordinary pressure die casting apparatus" (415a, ll. 59-60; see also, 414a, ll. 77-78).

2. "forming a mold by enclosing the pattern so made in a mass of plastic material" (415a, ll. 23-25) "such as plaster of Paris or gypsum" (415a, ll. 66-67).

3. "subjecting the low fusing material of said pattern through said plastic material to heat at a temperature sufficient to fuse the material of said pattern and causing said material to flow from within said mass of plastic material while in the molten state" (415a, ll. 25-31, 96-102).

4. "thereafter filling said plastic mold with molten metal having a fusing point comparatively higher than the material of said pattern" (415a, ll. 31-34), "by means of a pressure die casting apparatus in which metal is cast under very low pressures, the ordinary die casting method of die pressures being impractic-

able with a mold as fragile as the one above referred to" (415a, ll. 114-119).

Comparison of the method of Kralund with that of the patent in suit discloses certain *apparent* differences. Analysis makes plain that none of these differences is in any sense real.

(a) Jungersen "built up [his mold] around the [original] model" (186, c. 1, l. 35), whereas Kralund starts with an already built mold "having sunk therein a cavity, the contour and dimensions of which correspond with exactitude to the casting to be produced" (415a, ll. 52-55). On this score Mr. Tour testified, without challenge or contradiction, "The practice in the die casting art and in the foundry art in general through the years has been to build the patterns or molds from blueprints *or from models,* according to what was available"—either method being entirely conventional (153, 147a). It is significant here that some of Jungersen's licensees "do not start with a model" (101).

(b) Jungersen's mold "is preferably made of rubber" (186, c. 1, ll. 49-50; see also, c. 1, ll. 34-35; c. 2, ll. 29-32), whereas Kralund uses "a sectional [i. e., multipart] mold or die" (415a, l. 52) made of steel (414a, l. 78).

Multipart metal molds and rubber molds were well known long prior to Jungersen (479a, 486a-489a, 405a, 429a). Mr. Tour, referring to the rubber and the multipart molds of the prior art, said:

> "They have been used generally and still are used generally and interchangeably in the casting art. Wherever a specific thing or method seems most applicable that is the one that is used" (161, 148a-151a).

The records here in no way challenge the accuracy of this statement. To the contrary, Jungersen has put his

stamp of approval on it in his continuing charge that the use by O & B and Baden of multipart metal molds infringes the patent in suit (J's. Br., p. 46; see also, pp. 44, 47; see also, 98, 7-; 20a, 16a, 47a).

Judge Meaney, in effect, found equivalence (34a-35a, Findings 10, 17) and Judge Rifkind directly found:

> "By 1933 metal and rubber primary moulds were interchangeable and equivalent" (48, Finding 18; see also, 32).

(c) Jungersen discloses one type of applied force, i. e., centrifugal force (186, c. 2, ll. 5-21, 48-53); and Kralund another, i. e., pressure die casting (414a, ll. 77-78; 415a, ll. 72-76) to fill the mold cavity with molten material.

Again, as has been shown (*ante* pp. 4-5), there is no question of the equivalence of these means. Judge Rifkind directly held them to be "equivalent means" or "alternative means" (48-49, Findings 19-20) and even Judge Meaney does not seem to have held a contrary view (cf., 26a-27a), although he refused to give it effect.

Clearly, then, the differences which do exist are not vital and the system which Kralund patented in 1917 and the system which Jungersen repatented in 1938 are in every material respect the same.

Jungersen, however, urges that (J's. Br., pp. 34-35):

> "• • • it is clear that the problem that confronted men engaged in the casting of small articles of jewelry could not be solved or even simplified by Kralund's plan to produce large castings by using the high pressure of die casting to force the wax into vented steel molds. There would be no economy—indeed, no sense—in applying that practice to their problem. In the first place, the cost of the original steel dies for pressure die casting is at least as great as the cost of

stamping dies; secondly, when once the expense of making metal dies for casting a piece of jewelry by pressure die casting had beh incurred there would be no sense in resorting to the 'lost wax' procedure at all, since there is no difficulty in casting small articles directly by pressure die casting in the steel dies (Kralund patent 414a/1/45-52 and 415a/2/129 to 416a/1/3); and, thirdly, the plastic molds used by Jungersen to reproduce all of the fine intricacies of his pattern cannot withstand the high pressure of pressure die casting as Kralund proposed to use it—a pressure which he says is too great to be withstood even by the plaster of Paris investment molds. (See also 97a, f. 291; 98a, f. 294; 145a, f. 434)."

The record here does not sustain any phase of this statement.

Mr. Tour testified, without challenge, that the accused O & B process was "substantially the Kralund process with which [he had] had so many years' experience" (170a, 153-155), and Jungersen's witness, Debler, who testified to his familiarity with the Kralund process (116), when asked whether it was distinguishable from the process he had learned from Jungersen, answered:

> "I would say it is the same, the only difference is it is a steel mold instead of a rubber mold, as far as I am concerned" (117).

Obviously the "men engaged in the casting of small articles of jewelry", such as Ostby and Barton and Debler, were not going to be straight-jacketed, as Jungersen intimates, into "using the high presure of die casting to force the wax into vented steel molds".

Kralund specifically shows that the die casting pressure varies under varying conditions (415a, compare, ll. 51-80 with ll. 111-119) and Mr. Tour testified that "Pressures are

always adjusted to the particular job" and that "That is true of all casting operations, substantially" (181).

Nor would these men use "vented steel molds" if another type of mold was more convenient or less expensive. A die-casting die is simply a multipart metal mold made strong enough to take high pressures (97a-99a, 153). Clearly, you make your mold only as strong and only as expensive as is necessary (161-162).

Similarly, these men are not going to—and in fact have not—discarded Kralund because he emphasizes the possibility of making large castings.

Kralund was concerned with castings larger than jewelry (415a, ll. 123-130; 416a, ll. 1-3), but the patent specifically provided that "there are substantially no limitations upon the size of castings which may be made" (414a, ll. 104-106, 415a, ll. 1-2). And Kralund obviously intended that "intricate" castings be made. The patent specifically refers to "complicated castings" (416a, l. 18) and deals with the case "where the design of the casting is at all intricate, or possesses projections of small dimensions" (416a, ll. 34-36).

Mr. Tour's testimony on this score, entirely unimpeached, is revealing (155):

> "Q. Are the castings made according to the Kralund method accurate? A. They are. They are what we call now precision castings.
>
> "Q. And how is their accuracy as compared with the necessary accuracy of jewelry castings? A. *They are more accurate, and necessarily more accurate than jewelry castings on the whole.*
>
> "Q. Do such commercial castings have undercuts and projections or depressions in the article to be cast? A. A very large percentage of them do.
>
> "Q. Is there any limitation upon the intricacy of castings made by the Kralund process? A. There is no such limitation" (See also, 151, 163a).

On this score* Judge Rifkind found (47, Finding 11):

> "11. Kralund is concerned with commercial castings, especially *but not exclusively,* of large bulk. He teaches the use of the 'cire perdue' process with the addition of pressure derived from a die casting apparatus for the introduction of the wax into the die and for the introduction of the metal into the final mould. His primary mould is of metal machined to its desired shape. Kralund was directing his efforts toward the requirements of precision tool castings *which are more exacting than those of jewelry casting*" (See also, 32).

Jungersen shows no attribute of invention over Kralund, and Kralund anticipates the patent in suit.

2. The Jungersen patent does not disclose any patentable invention

The compass of the issue here is decidedly reduced by Jungersen's Brief, which quotes from the opinion of Mr. Justice Luxmoore as follows (J's. Br., p. 29):

> "'Mr. Cousin in his decision says at page 7: "It is agreed that on the evidence there is no disclosure of the casting of the wax or like model in a flexible mould in a centrifugal casting machine." Then he goes on to say: "This step forms the invention of the applicant's claim 1, and the question before me is whether such use of a centrifugal casting machine in carrying out one step of an admittedly known sequence constitutes an inventive step to justify the grant of letters patent."

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* The District Court, in the O and B case (25a) held that in none of the prior art "was a high degree of exactness required". There is no evidence to sustain this. The record is directly to the contrary (165a, 151, 155; 405a, ll. 24-34; 414a, ll. 16-18; 428a, ll. 34-36; 429a, l. 1; 433a, ll. 5-9).

"'The real question is whether that is an obvious step or not. The evidence shows clearly that there was a long-felt want for a method of casting articles of the particular nature which can be produced by this invention; that in spite of the long-felt want, the solution to the difficulty was not found until Mr. Jungersen's invention was made. In those circumstances I think it would be impossible for me to hold that the step is obvious' (512a; ff. 1535-6)."

Then follows the significant statement of Jungersen:

"Here is a concise statement of the basic issue now presented to this Court, and we submit that Mr. Justice Luxmoore's disposition of it was the correct one" (J's. Br., p. 29).

Whatever may have impelled Mr. Justice Luxmoore in that *uncontested* case to issue the British patent, it is submitted that no such patent can be validated in the United States for either of two reasons:

a. Jungersen adopts the statement of Mr. Justice Luxmoore that:

"the question before me is whether such use of a centrifugal casting machine in carrying out one step of an admittedly-known sequence constitutes an inventive step * * *."

Cellini and Haseltine and Spencer and La Gravure and Kralund practiced the "admittedly known sequence" and there is no indication of any limitation on the type of work they performed or on its quality. None of them gave any indication of difficulty in casting their wax patterns (*ante*, pp. 7-8, 13-14). And La Gravure applied the "admittedly known sequence" to the making of "small pieces of jewelry".

Jungersen's innovation lay solely in the use of centrifugal force to cast the wax, which all but Kralund had cast by gravity and which Kralund had cast by applying the force of a die-casting machine.

The record here demonstrates that there was nothing inventive in this. The need of applying force, centrifugal or one of the other types, to cast the wax arose out of the same circumstances and conditions as the need of applying force to cast the metal; these circumstances and conditions were well known, and the force, when employed, acted on the molten wax as it always had on the molten metal.

Long before Jungersen it was known that "when the founder has difficulty in filling the mold and getting detail he resorts to sufficient pressure to fill out the detail" (150, 99a, 162a). Thus, George Mortimer, writing in the Journal of the Institute of Metals, in 1926, after speaking of the difficulty of filling a mold by gravity, says:

> "It was natural, therefore, that engineers should early turn their attention to some form of artificial pressure whereby the mold could be filled by force and soundness and clean definition seemingly assured" (167; see also, 166-167).

To the same effect, Haseltine, in 1875, said:

> "Every practical metal founder is aware that if a mould is made of too fine and dense material, the metal cannot be made to lie closely to the mould and produce a perfect casting of the same, *unless some means for introducing the metal be employed other than simply pouring it into the mould* from the melting pot, as in the usual mode of casting" (435a-436a).

And where "soundness and clean definition", or "a perfect casting" was desired and the force of gravity was

insufficient, centrifugal force was widely applied. Mortimer called it "The simplest form of artificial pressure * * *" (167; so also, 485a).

In his dissent, Judge Learned Hand, speaking of the McManus patent No. 1,457,040 (417a-423a), said (217):

> "* * * McManus used a centrifuge to force fusible metal into all the crevices of the mould, and that too in a 'lost wax' process, the knowledge of which he appears to have assumed, for he does not disclose how to make the wax model."

It is entirely true that all of these statements referred to the use of applied force to cast molten metal rather than molten wax, but the same need impels either and the same principle controls both. This is not controverted.

Thus, Jungersen's witness, Shaw, testified (73):

> "Q. *Is there any difference in the action of that [centrifugal] machine in the state of casting wax and in the ensuing state of casting the metal?* A. There may be a slight difference in the manner of holding the mold.
>
> "Q. But the machine operates in the same way? A. *It is centrifugally spinned, yes.*
>
> "Q. *And it does the same thing to the molten material, does it not?* A. *Yes, it fills the metal into the cavity in the same way as the wax is filled into the mold.*"

Mr. Tour testified to exactly the same effect (164-165, 160a) and so, too, did Mr. Jungersen (92):

> "Q. And when the machine is revolved, when it is centrifuged, it makes no difference whether it be molten wax or molten metal, does it, in the fact that it throws out the molten material into the gate? A. It would throw out anything of weight if it is made free to leave.

"Q. And that applies to wax as well as metal, does it not? A. It applies to wax and metal, but in a greater amount to the metal than to the wax.

"Q. But they both operate in the same way under the influence of the centrifugal machine? A. The same principle is used, yes.

"Q. And the molten material in both cases is introduced into the mold? A. Yes" (so also, 99a).

Judge Rifkind summed up on this phase of the case (37):

"To put it simply, in the casting art it was old knowledge that the forced introduction of molten material into a mould produced greater definition of line and contour and greater fidelity of reproduction. McManus' patent showed the use of a centrifugal machine as the source of force for such purpose, which lent itself especially to sma tings. Were it at that time desired to make fait vax castings, as the final article of manufacture, i. ld not amount to invention to introduce the wax into the mould by centrifugal force. I fail to see why it rises to the level of invention when casting the wax pattern is an intermediate step in a longer process."

The situation here is directly within the doctrine of *Dow Co.* v. *Halliburton Co.*, 324 U. S. 320, 327-328; *Cuno Corp.* v. *Automatic Devices Corp.*, 314 U. S. 84, 89-91; and *Textile Machine Works* v. *Hirsch Co.*, 302 U. S. 490, 497-498.

The patent uses old means to perform their old function. This is not invention.

b. Nor may the patentee repatent an old combination simply by improving one of its steps as Jungersen has here attempted to do.

The situation is indistinguishable from that condemned by this Court in *Lincoln Co.* v. *Stewart-Warner Corp.*, 303

U. S. 545 and *Bassick Co.* v. *Hollingshead Co.*, 298 U. S. 415.

Jungersen has not created a *new* combination. He has taken the "admittedly known sequence" of steps and at the old casting step he has *substituted* casting by centrifugal force for casting by the force of gravity (as practiced by Cellini, Haseltine, Spencer and La Gravure) or casting by the force of a die-casting machine (as practiced by Kralund).

Judge Meaney's failure to understand this probably impelled his holding that Claims 1-4 were valid.

Thus, he says (25a):

> "It was not until Jungersen *added the additional step* of casting the wax pattern in the primary mould by the use of centrifugal force, that jewelry casting became a practically and commercially successful art."

Again,

> "Since *the additional step* used in the Jungersen patent is new, * * *" (25a)

and,

> "The fact that the Jungersen patent is in part a combination of old elements, *to which a new element has been added,* is not ground upon which to deny validity" (26a).

Jungersen no longer even contends a new element has been added (cf., J's. Br., p. 29). And the statement of the Court of Appeals for the Second Circuit clearly reflects the facts (215):

> "The judge in the *Ostby & Barton* case referred to the use of centrifugal force as an 'additional step' in the art which was both 'new' and 'novel'. We are

forced to disagree. It could hardly be an additional step; at most it can be only a modification or a different execution of an existing step."

In the *Lincoln Case*, this Court said (303 U. S. 549-550):

"* * * the improvement of one part of an old combination gives no right to claim that improvement in combination with other old parts which perform no new function in the combination."

3. Claims 5 and 6 of Jungersen are anticipated by all of the art relied on

The first four claims of the Jungersen patent are limited quite specifically to the disclosure of the patent. In contrast, Claims 5 and 6, held invalid by all four courts below, are very broad. Claim 5 is for a method; Claim 6 is to the old product—"an article of jewelry"—made according to that method.

Speaking of these two claims, Jungersen says that "An unambiguous claim for more than the patentee was entitled to claim as new is, of course, invalid; * * *" (J's. Br., p. 39).

Let us see if there is any ambiguity in these claims.

The steps of Claim 5 are:

a. "first producing a model"—This is clear enough, and Cellini and Spencer and Haseltine and La Gravure did it.

b. "then forming about said model a primary mould"—Again there is no room for doubt as to meaning. Cellini did this with ceramics, La Gravure in gelatine and Spencer and Haseltine in rubber.

c. "then removing the model from the primary mould" —This, too, is plain and all did it.

d. "then introducing into the mould by force sufficient to deposit the material into the depression or depressions of the primary mould molten wax or other material of low fusing point that will not injure the primary mould to form a pattern."

Here, if anywhere, Jungersen must assert ambiguity, but actually there is none. There is the simple and understandable requirement that the wax be introduced by "force sufficient to deposit the material". There is no suggestion that any particular sort of force be used if, in fact, it is "sufficient". And there can be no question that all the prior art did use a "force sufficient to deposit the material", whether it was the force of gravity, relied on by Cellini, Spencer, Haseltine and La Grayure, or the force of die casting, used by Kralund (*ante*, pp. 7-8, 13-14).

e. The final step is "employing the patterns so made for the manufacture of a casting mould". This is as plain as those before it, and the art for years has done exactly this.

The prior art from Cellini to the present day would infringe Claim 5. The claim clearly is anticipated.

Recognizing this, Jungersen says that "claims 5 and 6 can be and should be so construed as to embrace but not to extend beyond what Jungersen truly invented" (J's. Br., p. 36, pp. 36-39). To do this would make them essential duplicates of narrower Claims 1-4. But, in the words of this Court, "each claim must stand or fall, as itself sufficiently defining invention, independently of the others" and "none can be aided by reading into it parts of the specifications, or of other claims, which the patentees failed to include in it". *Altoona Theatres* v. *Tri-Ergon Corp.*, 294 U. S. 477, 487; see also *United Carbon Co.* v.

Binney Co., 317 U. S. 228, 236-237; *Universal Oil Co.* v. *Globe Co.*, 322 U. S. 471, 484-485; *Halliburton Co.* v. *Walker*, 329 U. S. 1, 8.

The four courts below clearly did not err in holding these claims invalid.

4. Claims 5 and 6 cannot be so construed as to make O & B an infringer

Although the Jungersen Brief lumps these claims together (J's. Br., 36-46), no serious argument is made on behalf of Claim 6 (cf. J's. Br. p. 36, footnote), which requires no further consideration.

Despite the concurrence of the four Courts below that Claim 5 is invalid, Jungersen now argues that the claim must be rewritten by narrowing the requirement that the wax be cast "by force sufficient to deposit the material", etc., so that "the wax be cast by [*applied*] force sufficient", etc. It is then contended that the use by O & B of an eye dropper or syringe to squirt in the wax (20a) falls within the claim. Jungersen cannot rewrite a plain and unambiguous claim for the purpose of a finding of infringement (*Smith* v. *Hall*, 301 U. S. 216, 232, *Universal Oil Co.* v. *Globe Co.*, 322 U. S. 471, 484-485; *Altoona Theatres* v. *Tri-Ergon Corp.*, 294 U. S. 477, 487).

Conclusion

The District Court for New Jersey fell into clear and demonstrated error in holding that the Jungersen patent related to "jewelry casting" and that the prior art was "non-analogous". It further erred in holding Jungersen's method involved an "additional step" over the prior art. And the Court of Appeals for the Third Circuit followed it in these errors, which led those Courts to hold Claims 1-4 valid.

The District Court in the Baden case and the Court of Appeals for the Second Circuit correctly held the entire Jungersen patent invalid.

It is submitted the judgment in the Baden case should be affirmed and that in the O & B case modified to declare the Jungersen patent void, in toto.

Respectfully submitted,

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November 2, 1948.

CHART

COMPARISON OF THE STEPS AS DISCLOSED IN JUNGERSEN PATENT NO. 2,118,468 WITH THE CORRESPONDING STEPS OF PRIOR ART PROCESSES.

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COMPARISON OF THE STEPS AS DISCLOSED IN JUNGERSEN PATENT NO. 2,118,468 WITH THE CORRESPONDING STEPS OF PRIOR ART PROCESSES.

The Jungersen Patent (1934)	The Cellini System (16th Cent.)	Spencer No. 748,996 (1904)	Haseltine 996 (1904)	Haseltine Br. 2467 (1875)	La Gravure, etc. (1926) (Translation)	Kralund No. 1,238,789 (1917)
Purpose: "The principal object of this invention is to facilitate the casting of small metal articles, particularly articles of intricate detail such as jewelry" * * * (186, c. 1, ll. 1-4). "It will be understood that this process is particularly applicable to the casting of precious metals, but it will also be understood that various other metals may be handled in the same way and particularly, base metals of tin and similar alloys" (187, c. 1, ll. 51-56).	Purpose: "Casting figures in bronze of life size or a little under" (454a).	Purpose: "The object of my invention is to make an elastic and substantial mold directly from any plain or intricately-formed pattern it is desired to reproduce without necessarily destroying the said pattern, * * *" (405a, ll. 7-11).	Purpose: "Th of my invention vention is to p substantial mold from a given p or intricately- be a perfect co ired to reproduce requiring much, stroying the said chiselling work 7-11). 428a, l. 1).	Purpose: "The main object of this invention is to produce a casting in metal from a given pattern, which casting will be a perfect copy of such pattern without requiring much, if any, after finishing or chiselling work. * * *" (427a, ll. 34-36; 428a, l. 1).	Purpose: "We can thus mould quantities of objects of illustration or reproduction, * * *" (474a, ll. 38-39).	Purpose: "My invention relates to a method or art of making commercial castings and more particularly to such a method which is especially adapted for the production of castings of large bulk, requiring no machining after completion to bring them to size, or give the desired finish thereto" (414a, ll. 12-18).
a) A model of the article to be cast is made "in wood, metal or other suitable material" (186, c. 1, ll. 28-33; and see all claims).	a) "Model the figure you wish to cast direct in the clay and rag composition above described" (454a).	a) "The pattern may be modeled in * * * intricate form * * * and it may have any number of sides or surfaces or undercut or projecting parts" (406a, ll. 9-14).	a) "* * * plast modeled in * * * ble, and all it may have any which may be aces or undercut are suitable. 6a, ll. 9-14). "If metal is u iron, type metal able" (430a, ll.	a) "* * * plaster of Paris, parian marble, and all other mineral substances which may be used for making a model are suitable. "If metal is used for making the model iron, type metal, or lead will be preferable" (430a, ll. 5-9).	a) There is no limitation on material of which model is made. Verleye speaks generally of "The model selected for reproduction" (469a).	a) The original model is not referred to.
b) "This model is placed upon a base and a flexible mould-forming material such as rubber, is built up around the model" and vulcanized (186, c. 1, ll. 33-37, 48-55; and see claims 1-4).	b) "There are divers ways of making the gesso (Plaster-of-Paris, or Gypsum—Webster's New International Dictionary) moulds. The best * * * is to make as many small pieces as when put together would make a complete man, and that without any undercutting * * * Each time that one of these small pieces is finished it must be tested, and you must see if you get a good impression from it & if the piece relieves * * *" (455a).	b) "It consists of an elastic mold made, preferably, of rubber * * *. The pattern A, Fig. 1, and the form for the pouring head are coated with a comparatively thin coating of rubber in an unvulcanized state, the thickness of the coating varying with the form and size of the pattern. * * * the mold B thus formed is vulcanized in any suitable manner, without removing the pattern" (405a, ll. 52-62).	b) "When the lastic mold made, procured the o * *. The pattern (properly mixed for the pouring zine, and with comparatively thin model or patte an unvulcanized solution, * * * e coating varying must be laid on e of the pattern. first layer or c formed is vulcan- on, all over, and nner, without re- ond layer is ad 5a, ll. 52-62). rubber lies on th about a quarter to be obtained which will retain ing, and bear collapsing the 15-33).	b) "When the first original model is procured the operator takes a solution (properly mixed) of india-rubber in benzine, and with a brush applies over the model or pattern a thin coat of such solution, * * * The first layer of rubber must be laid on very carefully, * * * The first layer or coat of rubber being laid on, all over, and around the model a second layer is added, and so on until the rubber lies on the model to a thickness of about a quarter of an inch * * * What is to be obtained is a thickness of rubber which will retain its shape after vulcanizing, and bear its own weight without collapsing the elastic mould" (430a, ll. 15-33).	b) "When it is required to obtain a mould from a piece which is not smooth, place the model, suitably immersed in wax, in such a way that the mould forms two shells * * * On the piece thus prepared and enclosed in its metal band, after having poured out the alcohol, pour the gelatin mixture and allow it to cool. At the end of two hours, it is time to proceed with the pouring of the other face." "The mould thus obtained is perfectly elastic; plaster, wax, or gelatin may be poured into it hot, without fear of destroying it, * * *" (472a-473a).	b) "In the practice of my method or art, I make a (metal) sectional mold or die having sunk therein a cavity, the contour and dimensions of which correspond with exactitude to the casting to be produced" (415a, ll. 51-55; see also, l. 22).
c) After removing the model from the finished mould "A suitable quantity of a very low temperature fusing material which may be wax or a metallic alloy such as Wood's metal is poured into the gate and the mould is rotated rapidly in the centrifugal casting machine" (186, c. 2, ll. 5-9; see also claims 1-4).	c) "Then you make the inlet holes in which you want to pour your wax, * * * "After this you can heat your wax, & when it is well molten, pour it in * * *" (459a).	c) "The mold being closed and held closed by suitable means, such as the sectional casing described, the reproduction is made by pouring into the mold the material G, Fig. 7, desired either in a liquid, semiliquid, or fused state, * * *" (410a, ll. 67-72).	c) "In this ela closed and held cut at the prope such as the section of melted w the reproduction a compound of the mold the ma- material * * * either in a liquid; is suspended in te, * * *" (410a, pose of cooling rubber mould in wax is poured mould at the op until full" (431a	c) "In this elastic mould an opening is cut at the proper place for the introduction of melted wax, resin, or paraffine, or a compound of these or other analogous material * * * Then the rubber mould is suspended in cold water for the purpose of cooling the wax and retaining the rubber mould in shape. Then the melted wax is poured slowly into the rubber mould at the opening cut for that purpose until full" (431a, ll. 20-23, ll. 28-31).	c) "Whether the mould has one face or two, it is now ready to reproduce the desired imprint. If this impression is to be made in wax, go over the surface of the mould with a brush barely moistened with spirit of turpentine, which produces the same results as alcohol, draws out bubbles and evaporates. * * * The principal advantage is the obtaining of waxes in every way similar to the model and which, cast in cire perdue give perfect reproductions almost without retouching" (473a-474a).	c) This die is adapted for use in an ordinary pressure die casting apparatus, by means of which the cavity formed by the portions a'—b' of the mold sections a—b is filled with a low fusing material such as wax, or a metal alloy having a low fusing point, to form a pattern which may be used in making a mold from suitable plastic material such as plaster of Paris or gypsum" (415a, ll. 58-67; see also, ll. 20-22, 72-75).
d) "The pattern thus produced is then invested in a material which will form a suitable mould for the metal which it is ultimately desired to form to that shape" (186, c. 2, ll. 33-36; and see claims 2 & 4). The pattern is invested by pouring around it a plaster-of-paris-like material which hardens and is known as an investment.	d) "After this I took some tripoli (soft deposits of silica—Webster's New International Dictionary) * * * & made from it a pigment as for painting, streaking it over the wax ornaments * * * When I had applied the first coat of tripoli I let it dry. Then I took the clay of which I told you before & coated the work over to the thickness of a knife's back, letting it dry again, and repeating this process, till the different coats were about a finger thick. * * *" (450a; see also p. 451a).	d) "The reproduction is then used as a pattern, about which is formed a mold of any comparatively infusible material, said mold to be constructed as a homogenous whole or in sections, as desired" (411a, ll. 41-45).	d) "The secon s then used as a relates to the f ormed a mold of around a patter ble material, said fine cast in the as a homogenous "This object is s desired" (411a, manner:—A fine prepared suitabl for casting met of clay is applie a brush * * * T with a body of other burned cla	d) "The second part of this invention relates to the forming of a loam mould around a pattern of wax, resin, or paraffine cast in the elastic mould. "This object is effected in the following manner:—A fine slush of clay or loam is prepared suitable for making loam moulds for casting metals. This slush or paste of clay is applied to the wax pattern with a brush * * * Then the same is covered with a body of finely-ground brick or other burned clay" (432a, ll. 10-18).	d) "The piece of wax is mounted on a metallic wire jet which is terminated by a funnel-shaped piece, it is coated with a special paint or investment used in dentistry; fasten it in the middle of a metal cylinder that is then filled with a mixture of plaster and river sand, also used by dentists" (475a).	d) "A suitable mold of plastic material is then formed about said pattern including the sprue f thereof, which sprue is allowed to extend through the wall of the plastic mold so as to form an ingate for the fluid metal and at the same time permit the escape of the material of the pattern" (415a, ll. 90-96).
e) "This investing material may be dried out in any suitable manner * * * but in any event the mould created by the flowing material is subjected to sufficient heat to melt the wax or other material of which the temporary pattern is made and all traces of this wax are completely removed from the mould" (186, c. 2, ll. 41-47; and see claims 2 & 4).	e) "Then I applied the whole to a slow fire, holding the vent holes downward, and so gradually melted out the wax, which I caught in a little receptacle down beneath * * *" (451a).	e) "The pattern is then removed by melting out or otherwise, leaving the mold in condition after it is dried to have cast into it any material desired" (411a, ll. 45-49).	e) "When a nu removed by melt- ready, and nea ving the mold in into a moderate ed to have cast ally melt out th esired" (411a, ll. composition patt used * * * This ally raised until red heat, so as and render the and ready for ca	e) "When a number of such moulds are ready, and nearly dry, they are placed into a moderately heated oven to gradually melt out the wax, resin, paraffin, or composition pattern, if the same has been used * * * This done the heat is gradually raised until the mould is at a low red heat, so as to burn out all the wax, and render the mould strong and hard, and ready for casting" (434a, ll. 10-17).	e) "After perfect setting of the plaster, disengage the master-jet and heat the whole to a red heat" ("In 'lost wax' casting, the model, exactly inclosed in sand and with a master jet easily disengaged, is then destroyed by heat; the wax melts, flows and leaves a cavity into which the metal flows directly, * * *") (475a).	e) "When the plastic material has solidified or set sufficiently, it is subjected to a heat at a temperature slightly above the fusing point of the material of the pattern, this metal when melted escaping through the opening formed by the sprue f" (415a, ll. 96-102).
f) "The mould (investment) is then placed in the centrifugal casting machine and the molten metal from which the casting is to be made is poured into this mould and is projected under applied force into the fine recesses preferably by the centrifugal action" (186, c. 2, ll. 48-53; and see claims 2 & 4).	f) Cellini does not use pressure. He simply pours the metal in the mould (451a-452a).	f) The mold has "cast into it any material desired" (411a, ll. 48-49).	into it any mate- 48-49). f) "Every pra aware that if a and dense mate made to lie close duce a perfect c some means for employed other into the mould in the usual mod the mould) "r pressure or we riser (as now metal is to lie produce a sharp To accomplish or furnace is em structed as to b pounds to the metal, * * * Th a melting pot a stand pipe of a (434a, ll. 36-37;	f) "Into the cavity produced by the conical piece pour melted metal. "At this moment pull a cover full of moist clay or containing moistened asbestos down on the upper surface of the cylinder and press strongly; the heat from the metal causes violent emission of steam which presses the fluid material into all the interstices of the mould. "The piece obtained by this process of hot moulding, casting under steam pressure, is of absolute perfection" (475a).	f) "When the plaster mold has been thus made, metal having the desired properties for a finished casting is poured or otherwise introduced into this plastic material, as by means of a pressure die casting apparatus in which metal is cast under very low pressures, the ordinary die casting method of die pressures being impracticable with a mold as fragile as the one above referred to" (415a, ll. 111-119). "In making complicated castings, it is sometimes necessary to apply slight pressure to the molten metal while it is flowing into the plaster mold" (416a, ll. 18-21).